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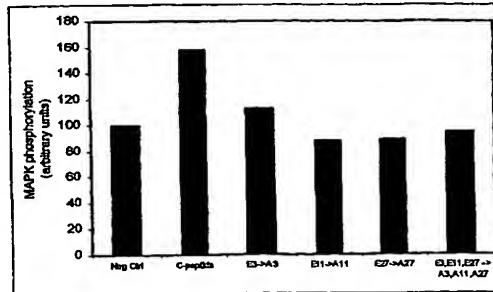
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- (71) Applicant (for all designated States except US): **CREATIVE PEPTIDES SWEDEN AB [SE/SE]**; Gåvlegatan 22, S-113 85 Stockholm (SE).
- (71) Applicant (for TT only): **GARDNER, Rebecca [GB/GB]**; Frank B. Dehn & Co., 179 Queen Victoria Street, London EC4V 4EL (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **WAHREN, John [SE/SE]**; Gåvlegatan 22, S-113 85 Stockholm (SE). **JORNVALL, Hans [SE/SE]**; Karolinska Institutet, Department of Medical Biochemistry and Biophysics, Division of Physiological Chemistry II, S-171 77 Stockholm (SE).
- (74) Agent: **FRANK B. DEHN & CO.**; 179 Queen Victoria Street, London EC4V 4EL (GB).
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(54) Title: FRAGMENTS OF PROINSULIN C-PEPTIDE



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(57) Abstract: The present invention relates to peptides being the N-terminal fragment of human proinsulin C-peptide and having the sequence EAEDLQVGQVEL (SEQ ID No: 2) or a fragment or peptide derivative thereof retaining the functional ability of the N-terminal fragment to contribute to C-peptide activity, wherein said fragment or peptide derivative comprises two acidic amino acid residues and is capable of adopting a conformation where said two acidic amino acid residues are spatially separated from one another by a distance of 9-14 Å between the α-carbons thereof; and wherein said peptide derivative does not include native C-peptide of any species nor human C-peptide 1-15, 1-24 or 1-26 or rat C-peptide 1-26. The invention also relates to peptides having an amino acid sequence comprising (i) the N-terminal fragment of human insulin C-peptide having the sequence EAEDLQVGQVEL (SEQ ID NO. 2) or (ii) a fragment or peptide derivative of amino acid sequence SEQ ID NO. 2 retaining the functional ability of said N-terminal fragment to contribute to C-peptide activity, wherein said fragment or peptide derivative comprises two acidic amino acid residues and is capable of adopting a conformation wherein said two acidic amino acid residues are spatially separated from one another by a distance of 9-14 Å between the α-carbons thereof; said peptide having C-peptide activity, but not including native C-peptide of any species nor human C-peptide 1-15, 1-24 or des 13-17. The invention further relates to peptides having the formula Xn-Y-Xm-Y-Xp where X is any amino acid, Y is an acidic amino acid, n=0-6, m=5-9 and p=0-6. First and second medical indications, pharmaceutical compositions and products for use as a combined preparation are also covered by the present invention.



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